ABSTRACT

[Abstract]

[Problems] A detector for detecting a different kind of object among objects being carried with high resolution using a plane spectrometer.

[Means for solving problems] In the present invention, a conveyer means (11), an irradiating means (4) of a near-infrared ray, a plane spectroscopic means (2) for performing plane spectroscopy for a reflected light, an imaging means (3), and an analyzing means (5) for detecting a different kind of object using a main component analyzing method obtaining spectral data of the reflected light are provided, and the aforementioned analyzing means (5) performs a preprocessing for averaging and standardizing the aforementioned spectral data, a wavelength axis averaging processing, an interpolation processing for performing Lagrangian interpolation, a measuring position optimization processing, a spatial axis averaging processing, a conversion processing of first-order/second-order differentiation, and a smoothing, a main component score calculation processing for calculating the main component score on the basis of previously obtained loading vector data, and a determination processing for performing judgment of the a different kind of object.

[Selected Figure] Fig. 1